Ubit AX210S

Ubit AX210S WiFi 6E PCIe Wireless Card Instruction Manual

Model: AX210S | Brand: Ubit

1. Introduction

This manual provides comprehensive instructions for the installation, setup, and operation of your Ubit AX210S WiFi 6E PCIe Wireless Card. This card is designed to upgrade your desktop PC with advanced WiFi 6E connectivity and Bluetooth 5.3 capabilities, offering enhanced speed, lower latency, and improved network efficiency. Please read this manual carefully before proceeding with installation.

2. Package Contents

Verify that all items are present in your package:

- Ubit AX210S WiFi 6E PCIe Wireless Card
- Two Detachable Antennas
- Bluetooth USB Cable
- Low-Profile Bracket (for small form factor PCs)
- Mounting Screws
- Mini CD with Drivers and Installation Guide
- Small Philips Head Screwdriver



Image: Contents of the Ubit AX210S package, including the wireless card, antennas, Bluetooth cable, and tools.

3. System Requirements

- Operating System: Windows 10 64-bit or Windows 11 64-bit.
- Available PCIe Slot: Compatible with PCIe X1, X4, X8, or X16 slots. PCIe X1 slot offers optimal compatibility.
- Available USB 2.0 Header on Motherboard (for Bluetooth functionality).



Image: Visual representation of Windows 10 and Windows 11 operating system compatibility.

4. Installation

4.1. Physical Installation

1. **Power Off PC:** Completely shut down your computer and disconnect the power cable.
2. **Open PC Case:** Remove the side panel of your computer case to access the motherboard.
3. **Locate PCIe Slot:** Identify an available PCIe X1, X4, X8, or X16 slot on your motherboard.
4. **Remove Slot Cover:** Remove the corresponding metal slot cover from the back of your PC case.
5. **Connect Bluetooth Cable to Card:** Before inserting the card into the PCIe slot, connect the small end of the provided Bluetooth USB cable to the designated port on the Ubit AX210S card. This is easier to do before the card is fully seated.
6. **Insert Wireless Card:** Carefully align the Ubit AX210S card with the chosen PCIe slot and press it down firmly until it is securely seated.
7. **Secure Card:** Use one of the provided mounting screws to secure the card's bracket to the PC case. If you have a

small form factor PC, replace the standard bracket with the included low-profile bracket before installation.

8. **Connect Bluetooth Cable to Motherboard:** Connect the other end of the Bluetooth USB cable to an available USB 2.0 header on your motherboard. Refer to your motherboard manual for the exact location of these headers.
9. **Attach Antennas:** Screw the two detachable antennas onto the connectors at the back of the wireless card. Adjust their orientation for optimal signal reception.
10. **Close PC Case:** Replace the side panel of your computer case and reconnect the power cable.

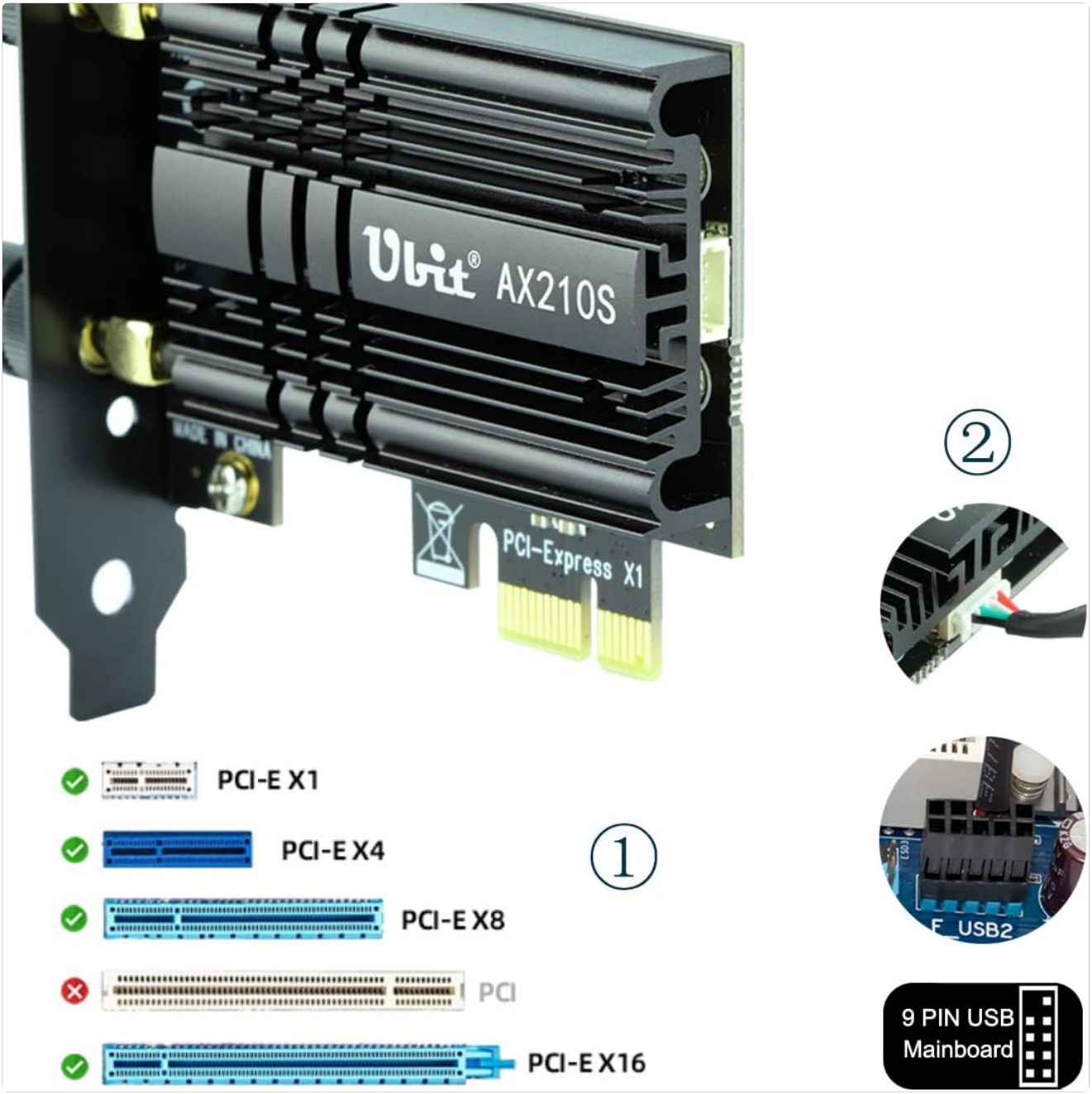


Image: Illustration showing compatible PCIe slots (X1, X4, X8, X16) and the location for connecting the Bluetooth USB cable to the motherboard's 9-pin USB header.

4.2. Driver Installation

After physical installation, power on your PC. Windows may automatically detect and install basic drivers. However, for full functionality, especially 6GHz connectivity and Bluetooth 5.3, manual driver installation is recommended.

1. **Check Device Manager:** Right-click on 'This PC' (or 'My Computer') on your desktop, select 'Manage', then 'Device Manager'. Look under 'Network adapters' and 'Bluetooth'. If the card is listed as an 'Unknown device' or has a yellow exclamation mark, drivers need to be installed.
2. **Install WiFi Driver:** Insert the provided mini CD into your optical drive. Navigate to the CD content and run the WiFi

driver installer (e.g., 'WiFi_21.0.0_Driver64_Win10.exe' or similar for your OS). Follow the on-screen prompts to complete the installation.

3. **Install Bluetooth Driver:** From the same mini CD, locate and run the Bluetooth driver installer (e.g., 'BT_21.0.0_64_Win10.exe' or similar). Follow the on-screen instructions.
4. **Restart PC:** After both drivers are installed, restart your computer to ensure all changes take effect.
5. **Download Latest Drivers (Optional but Recommended):** For optimal performance and the latest features, visit the Ubit official website or Intel's support page for the AX210 chipset to download and install the most up-to-date drivers.

5. Setup

5.1. Connecting to WiFi

1. **Access Network Settings:** Click the WiFi icon in the system tray (bottom-right corner of your screen).
2. **Select Network:** Choose your desired WiFi network (2.4GHz, 5GHz, or 6GHz band) from the list of available networks.
3. **Enter Password:** Enter the network security key (WiFi password) and click 'Next' or 'Connect'.
4. **Confirm Connection:** Your PC should now be connected to the WiFi network.

5.2. Bluetooth Pairing

1. **Enable Bluetooth:** Go to Windows Settings > Devices > Bluetooth & other devices, and ensure Bluetooth is turned 'On'.
2. **Add Device:** Click 'Add Bluetooth or other device' and select 'Bluetooth'.
3. **Pair Device:** Put your Bluetooth device (e.g., headphones, mouse, keyboard) into pairing mode. Select it from the list of discovered devices on your PC and follow any on-screen prompts to complete pairing.



Image: Diagram illustrating Bluetooth 5.3 connectivity between the PC and various peripherals like headphones, speakers, smartphones, and printers.

6. Key Features

- **WiFi 6E Tri-Band Connectivity:** Supports 2.4GHz (up to 574Mbps), 5GHz (up to 2400Mbps), and 6GHz (up to 2400Mbps) bands for versatile and high-speed wireless connections. The 6GHz band offers increased capacity and reduced interference for demanding applications.
- **Bluetooth 5.3:** Provides improved speed, extended range, and enhanced reliability compared to previous Bluetooth versions, enabling seamless connection with a wide range of Bluetooth devices.
- **OFDMA and MU-MIMO:** These technologies enhance network efficiency, allowing multiple devices to communicate simultaneously with the router, reducing latency and improving overall network performance in congested environments.
- **160MHz Channels:** Supports wider 160MHz channels for higher peak data rates and increased throughput, crucial for high-bandwidth activities like 4K/8K video streaming and online gaming.



Image: Visual representation of the Ubit AX210S WiFi 6E card's speed capabilities across the 2.4 GHz, 5 GHz, and 6 GHz frequency bands.

7. Troubleshooting

- **No WiFi or Bluetooth Detected:**
  a. Ensure the card is securely seated in the PCIe slot.
  b. Verify the Bluetooth USB cable is correctly connected to both the card and the motherboard's USB 2.0 header.
  c. Confirm that the necessary drivers (WiFi and Bluetooth) have been installed correctly. Check Device Manager for any unknown devices or errors.
  d. Try installing the card in a different PCIe slot if available.
- **Slow WiFi Speed:**
  a. Ensure your router supports WiFi 6E and is configured for optimal performance.
  b. Check that your PC is connected to the appropriate frequency band (6GHz for highest speed, 5GHz for good balance, 2.4GHz for range).
  c. Update your WiFi drivers to the latest version from the Ubit or Intel website.

d. Adjust the orientation of the external antennas for better signal reception.

- **Bluetooth Device Not Pairing:**
  a. Ensure the Bluetooth USB cable is properly connected.
  b. Verify Bluetooth drivers are installed and up-to-date.
  c. Make sure the Bluetooth device is in pairing mode and within range.
  d. Remove and re-add the Bluetooth device in Windows settings.

8. Specifications

Feature	Detail
Model Number	Ubit-AX210S
Wireless Standard	WiFi 6E (802.11ax)
Frequency Bands	2.4GHz, 5GHz, 6GHz (Tri-Band)
Max Data Rate (2.4GHz)	Up to 574Mbps
Max Data Rate (5GHz)	Up to 2400Mbps
Max Data Rate (6GHz)	Up to 2400Mbps
Bluetooth Version	Bluetooth 5.3
Host Interface	PCIe X1 (Compatible with X4, X8, X16 slots)
Operating System Support	Windows 10 64-bit, Windows 11 64-bit, Linux
Dimensions	2.76 x 0.2 x 3.94 inches (Card only)
Weight	4 ounces

9. Maintenance

- **Keep Drivers Updated:** Regularly check the Ubit or Intel website for the latest driver updates to ensure optimal performance and security.
- **Clean Antennas:** Periodically wipe the antennas with a soft, dry cloth to remove dust.
- **Ensure Proper Airflow:** Make sure your PC case has adequate ventilation to prevent overheating, which can affect the performance and lifespan of internal components.

10. Warranty and Support

Ubit products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official Ubit website or contact their customer service directly. Keep your purchase receipt for warranty claims.
Ubit Official Website: www.ubitsz.com